

ABSTRACT OF THE DISCLOSURE

A method of making optical quality films is described. A silica film is deposited on a wafer by PECVD (Plasma Enhanced Chemical Vapor Deposition). The deposited film is then subjected to a first heat treatment to reduce optical

5 absorption, wafer warp, and compressive stress. A second film is deposited. This step is then followed by a second heat treatment to reduce optical absorption, wafer warp and tensile stress. The two heat treatments have similar temperature profiles.